Amendments to the Claim:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-29 (cancelled).

30 (currently amended). ~~A method~~ The library according to claim ~~1~~ 32, wherein said ~~glycosyl donors~~ carbohydrate structures comprise component carbohydrate structures associated with ~~adhesion ligands for bacterial receptors that are expressed on~~ human cell surface ~~antigens~~ receptors for bacterial adhesins.

31 (currently amended). ~~A method~~ The library according to claim ~~1~~ 32, wherein said ~~glycosyl donors~~ carbohydrate structures comprise component carbohydrate structures associated with malignant cell antigens.

32 (currently amended). ~~A combinatorially-generated~~ The library of claim 46, said library comprising a plurality of different glycopeptides ~~prepared by randomly reacting a~~ having the same peptide scaffold but varying with regard to the carbohydrate structures attached to that scaffold, of the said attached carbohydrate structures each consisting of one or more component carbohydrate structures, each component carbohydrate structure being ~~with either~~ (1) ~~carbohydrate structures~~ associated with a human cancer-associated mucins~~,~~ or (2) associated with a human cell surface receptor for a ~~carbohydrate structures which function as adhesion ligands for~~ bacterial adhesin ~~receptors that are expressed on human cell surface antigens~~,

where said peptide scaffold comprises at least one amino acid which is glycosylatable so as to form an O-linkage, and at least one carbohydrate structure directly attached to a peptide scaffold of at least one of said glycopeptides is O-

linked to said scaffold at such an amino acid.

33 (currently amended). ~~A glycopeptide~~ The library according to claim 32, wherein said peptide scaffold ~~is~~ comprises a fragment, at least four amino acids in length, of a tandem repeat of mucin-1 (MUC1) core protein and said component carbohydrate structures are selected from the group consisting of galactose, ~~galactosamine,~~ N-acetylgalactosamine, N-acetylglucosamine, and sialyl-galactosamine ~~are reacted with said MUC1 tandem repeat to produce a library of carcinoma-associated mucins~~.

34-37 (cancelled).

38. (currently amended). A method of identifying a target binding ~~biologically-active compound~~ glycopeptide in a ~~combinatorially-generated~~ glycopeptide library, comprising:

providing ~~generating~~ a library ~~of glycosylated scaffolds~~ comprising glycopeptides, according to claim ~~34~~ 32; and

screening ~~components~~ glycopeptides of said library for a ~~biologically-active compound that has competitive inhibitory, immunostimulatory or antibody activity~~ glycopeptide which binds said target.

39 (withdrawn; currently amended). A method of identifying an anti-viral compound, comprising:

providing ~~generating~~ a library, ~~of glycosylated platforms~~ comprising glycopeptides, according to claim ~~34~~ 50; and

screening ~~components~~ glycopeptides of said library for anti-viral activity.

40 (withdrawn; currently amended). A method of identifying an anti-bacterial compound, comprising:

providing ~~generating~~ a library, ~~of glycosylated scaffolds~~ comprising glycopeptides, according to claim 30; and

screening ~~components~~ glycopeptides of said library for the ability competitively to inhibit bacterial adhesion to a host cell.

41 (withdrawn; currently amended). A method of identifying compounds for detection or treatment of cancer, comprising:

generating a library, comprising ~~of glycosylated platforms~~ glycopeptides, according to claim 31; and

screening ~~components~~ glycopeptides of said library for anti-cancer activity.

42 (currently amended). ~~A glycopeptide~~ The library according to claim 32, wherein said component carbohydrate structures are selected from the group consisting of GalNAc, βGal(1-3)αGalNAc and sialyl-GalNAc.

43 (currently amended). ~~A glycopeptide~~ The library according to claim 32, wherein the peptide scaffold is a cyclic peptide.

44 (currently amended). ~~A glycopeptide~~ The library according to claim 32, wherein the peptide scaffold is a core protein of MUC1.

45 (new). A library comprising a plurality of different glycopeptides having the same peptide scaffold but varying with regard to the carbohydrate structures attached to that scaffold, said attached carbohydrate structures each consisting of one or more component carbohydrate structures, each component carbohydrate structure being (1) associated with a human cancer-associated mucin, or (2) associated with a human cell surface receptor for a bacterial adhesin,

where at least one of the following conditions applies:

(I) said peptide scaffold is a cyclic peptide;

(II) said peptide scaffold comprises at least one D-amino acid;

(III) said peptide scaffold comprises at least a four amino acid subsequence of the core protein of MUC1, said subsequence comprising a glycosylation site; or

(IV) one or more of said carbohydrate structures

comprises sialic acid;
said library optionally comprising the peptide scaffold as an unglycosylated peptide.

46 (new). The library of claim 45 which consists only of peptides, including glycopeptides, having the same peptide scaffold.

47 (new). The library of claim 46, said library comprising a plurality of different glycopeptides having the same peptide scaffold but varying with regard to the carbohydrate structures attached to that scaffold, of the said attached carbohydrate structures each consisting of one or more component carbohydrate structures, each component carbohydrate structure being (1) associated with a human cancer-associated mucin, or (2) associated with a human cell surface receptor for a bacterial adhesin,

where said peptide scaffold is a cyclic peptide.

48 (new). The library of claim 46, said library comprising a plurality of different glycopeptides having the same peptide scaffold but varying with regard to the carbohydrate structures attached to that scaffold, of the said attached carbohydrate structures each consisting of one or more component carbohydrate structures, each component carbohydrate structure being (1) associated with a human cancer-associated mucin, or (2) associated with a human cell surface receptor for a bacterial adhesin,

where said peptide scaffold comprises at least one D-amino acid.

49 (new). The library of claim 46, said library comprising a plurality of different glycopeptides having the same peptide scaffold but varying with regard to the carbohydrate structures attached to that scaffold, of the said attached carbohydrate structures each consisting of one or more component carbohydrate structures, each component

carbohydrate structure being (1) associated with a human cancer-associated mucin, or (2) associated with a human cell surface receptor for a bacterial adhesin,

where said peptide scaffold comprises at least a four amino acid subsequence of the core protein of MUC1, said subsequence comprising a glycosylation site.

50 (new). The library of claim 46, said library comprising a plurality of different glycopeptides having the same peptide scaffold but varying with regard to the carbohydrate structures attached to that scaffold, of the said attached carbohydrate structures each consisting of one or more component carbohydrate structures, each component carbohydrate structure being (1) associated with a human cancer-associated mucin, or (2) associated with a human cell surface receptor for a bacterial adhesin,

where one or more of said carbohydrate structures comprise sialic acid.

51 (new). A method of identifying a biologically active compound in a library, which comprises identifying at least one target-binding glycopeptide by the method of claim 38, said target-binding activity being associated with a biological activity, and then determining whether said target-binding glycopeptide has such biological activity.

52 (new). The method of claim 38 where said biological activity is an immunostimulatory activity.

53 (new). The method of claim 38 where at least said target-binding glycopeptides are screened for the ability to competitively inhibit the binding of a known ligand to said target.

54 (new). The method of claim 53, where said known ligand is the unglycosylated peptide scaffold for said library.

55 (new). The library of claim 32, where the number of

different peptides, including glycopeptides, with the same peptide scaffold is at least 32.

56 (new). The library of claim 32, where the number of different peptides, including glycopeptides, with the same peptide scaffold is at least 243.

57 (new). The library of claim 32, where the number of different peptides, including glycopeptides, with the same peptide scaffold is at least 1024.

58 (new). The library of claim 32, where the number of different peptides, including glycopeptides, with the same peptide scaffold is at least 3125.

59 (new). The library of claim 32, where the number of different peptides, including glycopeptides, with the same peptide scaffold is at least 7776.

60 (new). The library of claim 32, where the number of different peptides, including glycopeptides, with the same peptide scaffold is at least 9.

61 (new). The library of claim 32, where the number of different peptides, including glycopeptides, with the same peptide scaffold is at least 39.

62 (new). The library of claim 32, which is obtainable by the steps of

(a) providing at least one first level library, each first level library comprising a plurality of different glycopeptides, said glycopeptides each comprising a peptide scaffold and at least one carbohydrate structure, said glycopeptides being diversely glycosylated, where at least one carbohydrate structure of each of said glycopeptides provides at least one unblocked second level glycosylation site, such that reaction with a glycosyl donor at that site results in extension of said carbohydrate structure, and

(b) randomly glycosylating said first level library by reacting the library with a mixture of at least two different

glycosyl donors, thereby enlarging the carbohydrate structures of a plurality of said glycopeptides whereby a second level library comprising glycopeptides of greater carbohydrate diversity is created.

63 (new). The library of claim 32, wherein said peptide scaffold is at least four amino acids long.

64 (new). The library of claim 63 wherein said peptide scaffold is derived from a cancer-associated mucin.

65 (new). The library of claim 64 wherein said peptide scaffold is derived from a MUC1 core protein.

66 (new). The library of claim 64 wherein said peptide scaffold is a fragment of the core protein of a cancer associated mucin.

67 (new). The library of claim 64 wherein said peptide scaffold is a fragment of MUC1 core protein.

68 (new). The library of claim 65 where said peptide scaffold comprises the MUC1 core protein tandem repeat or a fragment thereof.

69 (new). The library of claim 65 where said peptide scaffold comprises the amino acid sequence GSTA (SEQ ID NO:2).

70 (new). The library of claim 32 where said peptide scaffold comprises at least two glycosylation sites.

71 (new). The library of claim 32 wherein said peptide scaffold comprises not more than five glycosylation sites.

72 (new). The library of claim 71 where said peptide scaffold is a fragment of the MUC1 core protein.

73 (new). The library of claim 32 wherein at least three different monosaccharides are found, collectively, among the monosaccharides directly attached to at least one glycosylation site of the peptide scaffold of at least one glycopeptide in the library.

74 (new). The library of claim 32 wherein at least five different monosaccharides are found, collectively, among the

monosaccharides directly attached to at least one glycosylation site of the peptide scaffold of at least one glycopeptide in the library.

75 (new). The library of claim 70 in which at least one glycopeptide of said library is glycosylated at all of glycosylation sites of said peptide scaffold.

76 (new). The library of claim 70 wherein, if n is the number of glycosylation sites on said peptide scaffold, said library comprises at least one m-glycosylated peptide, where m ranges through all integers from 0 to n.

77 (new). The library of claim 32 in which all library members are glycosylated at all glycosylation sites of said peptide scaffold.

78 (new). The library of claim 46 where a plurality of different glycopeptides of the library, each comprising the same carbohydrate structure, vary with respect to the point of attachment of said carbohydrate structure.

79 (new). The library of claim 46 where a plurality of different glycopeptides of the library vary with respect to whether a particular glycosylation site is glycosylated.

80 (new). The library of claim 46 where a plurality of different glycopeptides of the library, each glycosylated at the same glycosylation site, vary with respect to the carbohydrate structure attached to that glycosylation site.

81 (new). The library of claim 46 wherein a plurality of different glycopeptides of the library all present a first carbohydrate structure and all present a second and different carbohydrate structure, but vary with respect to the glycosylation sites to which these first and second carbohydrate structures are attached.

82 (new). The library of claim 81 wherein such variation in attachment comprises variation in the order of attachment of said first and second structures upon the peptide scaffold.